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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,470	02/28/2002	Jin Hui Ou-Yang	K35A1022	2356

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EXAMINER

DAVIS, DAVID DONALD

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,470

Applicant(s)

OU-YANG ET AL.

Examiner

David D. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5-14 and 16-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Wood et al (US 5,907,453). Wood et al shows in figure 1 a shroud assembly for a disk drive 100 that includes a rotatable disk 104; a printed circuit board; a data transfer head 110; an actuator assembly 114 that positions the data transfer head 110 with respect to the rotatable disk 104; and a flex cable 132 that interconnects the actuator assembly 114 and the printed circuit board 131. Also shown in figure 1 is the flex cable 132 has a first end 134 connected to the actuator assembly 114 and a second end connected to bracket 136 connectable to the printed circuit board. The shroud assembly includes a disk shrouding portion 138; a cable mounting portion 136, as shown in figure 1 including a first surface and a second surface. The first surface configured to receive a transition portion of the flex cable 132 proximate to the second end. The second surface configured to receive the second end of the flex cable 132 and to position the second end for engagement by the printed circuit board 13. A cable shrouding portion, which is apart of mounting portion 136, is configured to shield a spanning portion of the flex cable 132 between the cable mounting portion and the actuator assembly 114 from airflow generated by the rotation of the rotatable disk 104. See also column 5, lines 20-24 of Wood et al.

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The shroud assembly of Wood et al with the disk shrouding portion 138, the cable mounting portion 136, and the cable shrouding portion are integrally formed. *Note: with respect to the term "integrally" or integral the disk shrouding, the cable mounting and the cable shrouding portions are considered integral because the term integral is not necessarily restricted to a one-piece or unitary article. In re KOHNO, 157 USPQ 275 (CCPA 1968).*

Also note: with respect to the term "formed" of "integrally formed", the claims are directed to a shroud assembly, per se, the method limitations "integrally formed" has only been accorded weight to the extent that it affects the structure of the completed shroud assembly. Note that "[d]etermination of patentability in 'product-by-process' claims is based on product itself, even though such claims are limited and defined by process [i.e., "integrally formed"], and thus product in such claim is unpatentable if it is the same as, or obvious form, product of prior art, even if prior product was made by a different process", In re Thorpe, et al., 227 USPQ 964 (CAFC 1985). Furthermore, note that a "[p]roduct-by-process claim, although reciting subject matter of claim in terms of how it is made [i.e., "integrally formed"] is still product claim; it is patentability of product claimed and not recited process steps that must be established, in spite of fact that claim may recite only process limitations", In re Hirao and Sato, 190 USPQ 685 (CCPA 1976).

Figure 1 of Wood et al also shows an arm shrouding portion 140 "integrally formed" with the cable shrouding portion, the arm shrouding portion 140 is configured to shield an actuator arm from airflow generated by the rotation of the rotatable disk 104. The cable shrouding portion, which is apart of mounting portion 136, forms an arc having an inside surface. The inside surface located on a side of the shroud assembly is opposite the cable mounting portion

136 face generally the same direction. In addition, the first surface of the cable mounting portion 136 is generally perpendicular to the second surface of the cable mounting portion 136.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 3 and 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al (US 5,907,453). Wood et al shows the shroud assembly, as described, supra. However, Wood et al is silent as to the shroud assembly having the cable shrouding portion including a distal end, a mounted end; a first edge proximate the cable mounting portion; a second edge opposite the first edge; a length being the distance between the distal end and the mounted end; and a width being the distance between the first edge and the second edge with the length being about two times the

width. Wood et al is also silent as to the shroud assembly being the cable shrouding portion that is about as long as the disk shrouding portion.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to specify relative dimensions of the shroud assembly of Wood et al. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to specify relative dimension of a shroud assembly, which is well within the purview of a skilled artisan and absent an unobvious result, so as to optimize the air flow by “enhancing the convective cooling of the coil of a disk drive voice coil motor so as to improve the operation performance of the disk drive.” See column 1, lines 7-11 of Wood et al.

Response to Arguments

6. Applicant's arguments filed February 17, 2004 have been fully considered but they are not persuasive. Applicant assert in the first sentence on page 12 that “Wood does not have any structure that shields any portion (e.g., a spanning portion of a flex cable or an actuator arm over disk.” As stated supra, Wood discloses a cable shrouding portion, which is apart of mounting portion 136, configured to shield a spanning portion of the flex cable 132 between the cable mounting portion and the actuator assembly 114 from airflow generated by the rotation of the rotatable disk 104. See also column 5, lines 20-24 of Wood et al.

Allowable Subject Matter

7. Claim 15 is allowed.

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Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

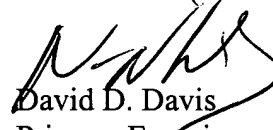
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is (703) 308-1503. The examiner can normally be reached on Monday thru Friday between 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David D. Davis
Primary Examiner
Art Unit 2652

ddd